Searching for Canadian Data Research Bootcamp
Locate interesting data from Statistics Canada.

Understand where to find more information about the standard geographies.

Explore Canadian microdata.

Find other sources of Canadian data.

Impress friends and family?
WHO? WHO? WHO?

- Governments: municipal, provincial, national.

- Associations and non-profit organizations: local, national, international.


- For profit organizations: think-tanks, analysts, businesses.

- Compilers: database providers, almanachs.

Crime and Justice Challenge
CANSIM

Publicly accessible interactive data tables from Statistics Canada available for various topics.

Access these:
• From the "related products" page of a Stats Can survey.
• From a related topic in the subject page.
• By searching Stats Can's CANSIM database.
• By searching in CANSIM@CHASS (Dalhousie Only).

When looking at a CANSIM table on Stats Can's website, be sure to:
• Click on "Add/Remove data" to see more options.
• Keep track of the table numbers as the URL easily breaks.
CANSIM Tables on Stats Can's website

Table 203-0028
Survey of household spending (SHS), detailed food expenditures, Canada, regions and provinces annual (dollars)

Add/Remove data | Manipulate | Download

Selected items [Add/Remove data]

Geography = Canada
Statistic = Average expenditure per household

<table>
<thead>
<tr>
<th>Food expenditures, summary-level categories</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food expenditures ¹</td>
<td>7,791</td>
<td>7,760</td>
<td>7,934</td>
<td>8,109</td>
<td>8,629</td>
</tr>
<tr>
<td>Food purchased from stores</td>
<td>5,573</td>
<td>5,564</td>
<td>5,718</td>
<td>5,880</td>
<td>6,126</td>
</tr>
<tr>
<td>Bakery products</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bakery products</td>
<td>560</td>
<td>531</td>
<td>567</td>
<td>562</td>
<td>574</td>
</tr>
<tr>
<td>Bread and unsweetened rolls and buns</td>
<td>268</td>
<td>251</td>
<td>264</td>
<td>257</td>
<td>256</td>
</tr>
<tr>
<td>Cookies and crackers</td>
<td>116</td>
<td>126</td>
<td>118</td>
<td>115</td>
<td>126</td>
</tr>
<tr>
<td>Other bakery products</td>
<td>176</td>
<td>154</td>
<td>185</td>
<td>191</td>
<td>192</td>
</tr>
</tbody>
</table>

- Click on "Add/Remove" data to reveal additional fields.
- Keep track of the table numbers as the URL easily breaks.
- Click on "Download" to retrieve ALL data.
Find CANSIM tables from the "related products" page of a Stats Can survey: when you are aware of a relevant survey for your topic and wish to see the CANSIM tables generated for that survey, or would like to explore surveys related to your topic.

Browse CANSIM tables by topic: click on the "Data" tab of a topic of interest in Statistics by subject. This will also find non-CANSIM tables.

Search Stat Can's CANSIM database: when you want to do a keyword search.

Search CANSIM@CHASS (Dalhousie only): when you want to do a keyword search, or try some more sophisticated search techniques.
Finding CANSIM tables via Statistics by subject

Statistics by subject

Aboriginal peoples
Agriculture
Business performance and ownership
Business, consumer and property services
Children and youth
Construction
Crime and justice
Culture and leisure
Economic accounts

Income, pensions, spending and wealth
Information and communications technology
International trade
Labour
Languages
Manufacturing
Population and demography
Prices and price indexes
Reference

Pick a subject!
Finding CANSIM tables via Statistics by subject

Statistics by subject – Health

Filter results by

Keyword(s)

Enter title, description, etc.

Search

Sort by date

Apply

Filter

All (2,050) Data (910) Analysis (1,031) Reference (109)

Subject

Health (2050)

Disability

Diseases and health conditions

Environmental factors

Health care services

Life expectancy and deaths

Might include some non-CANSIM tables.

Try entering the desired level of geography as a keyword.
Finding CANSIM tables via Statistics Canada Surveys

Home → Browse by key resource

Definitions and documentation
- Definitions, data sources and methods
- Questionnaires
- Surveys

Surveys and statistical programs
List by subject

List of surveys and statistical programs by record number

- Aboriginal peoples
- Agriculture
- Business, consumer and property services
- Business performance and ownership
- Children and youth
- Construction
- Crime and justice
Finding CANSIM tables via Statistics Canada Surveys

**Explore « Links to Related products »**

### Canadian Community Health Survey - Annual Component (CCHS)

<table>
<thead>
<tr>
<th>Canadian Community Health Survey - Annual Component (CCHS)</th>
<th>Variable(s)</th>
<th>Summary of changes</th>
<th>Other reference periods</th>
</tr>
</thead>
</table>

**Related products**

- The Daily
- Summary tables
- Publications
- Analysts and researchers
- CANSIM
Finding CANSIM tables via Statistics Canada CANSIM database

Also allows you to search by Subject and by Survey.
The Canadian census happens every 5 years (on the '1s' and the '6s'). Data is available through publicly accessible tables and profiles, as well as through restricted to Dalhousie interfaces that also include special subsets of data not available on the open web.

**Access 2016 data:**
- Through Statistics Canada's Census Profile.
- Through Statistic Canada's Data Tables.
- Via CHASS's census analyser (Dalhousie only).

**Access older data** (try links above first):
- By consulting the print collections – see links in the Data for the Social Sciences research guide or internet archive's collection.

**When looking at census data, be sure to:**
- Be aware of random rounding.
- Learn census geography.
- Be prepared to take on some challenges if looking for data for smaller geographies, working with older censuses, or trying to compare numbers in time.
SUSPECT PROFILE

• Country of origin: Canada
• Frequency of crimes committed: operates every 5 years.
• Start of operation: the first census was in 1871.

Note: dangerous obsession with "1" and "6"
What data is available in the census?

Census Profile, 2016 Census

Release date: February 8, 2017 | Updated on: September 13, 2017

This profile presents information from the 2016 Census of Population for various levels of geography, including provinces and territories, census metropolitan areas, communities and census tracts. Using the search or browse options below, users can search for an area of interest by typing its place name, postal code or geographic code or by browsing a list. Data will be available according to the 2016 Census Program release schedule.

SEARCH

- Place name
  - Aboriginal peoples
  - Age and sex
  - Education
  - Families, households and marital status
  - Housing
  - Immigration and ethnocultural diversity
  - Income

BROWSE

- Journey to work
- Labour
- Language
- Language of work
- Mobility and migration
- Population and dwelling counts
- Type of dwelling
Be aware of random rounding. Many numbers in the census end in '0' or '5'. Totals and subtotals are rounded from the correct value, so manually adding numbers might not add up to the total.
Use the Canadian Census Analyser (Dalhousie only) to Extract Data
Clean Up the Data in Excel

BASICS OF EXCEL FOR DATA ANALYSIS

Cleaning up data obtained from the Canadian Census Analyzer
DANGERS OF TIME TRAVEL
Data is often suppressed for smaller geographies.

Geographies change over time.

Variables change over time. Older data might not have been encoded digitally.
Microdata and the Continuum of Access

Data from Stats Can surveys are sometimes available as microdata – huge files where every row is a respondent and every column a variable. Surveys are often available at different levels of access.

Access microdata:

- By searching Odesi (search only).
- By searching and retrieving datasets from Nesstar.
- By retrieving datasets from SDA.
- By searching and retrieving international datasets from ICPSR.

When looking at microdata, be sure to:

- Respect the DLI license (where applicable). No using for commercial purposes, no sharing the microdata externally (but sharing results is okay), etc.
Accessing Canadian microdata at Dal requires complying with the DLI license.
Odesi

Dalhousie University does not subscribe to Odesi, and so it is not an appropriate interface to use to access data.

However, Odesi has excellent metadata and is a great way to search for variables of Statistics Canada’s Public Use Microdata Files (PUMFs). These can then be accessed in SDA or Nesstar (Dalhousie only).

Access Odesi:
• By going to Odesi.ca

Locate PUMFs:
• Uncheck "All of Odesi" and check only "Statistics Canada (microdata)"
• Search for relevant keywords.
• Look at the "Series" filter to explore possible relevant surveys.
• Order results by date instead of relevance, and click on "Matching Variables" if available.
Search in Odesi

Search for your desired variable in Odesi

Find data:
- unemploy*
- Anywhere

Date:
- Earliest
- Present

Collections:
- All of Odesi
- Statistics Canada (Microdata)
- Statistics Canada (Aggregate data)
- Public Opinion Polls
- Other Data

Additional Collections:
- Statistics Canada (Master File)
- CORA
- ICPSR
- Canadian Dataverses

Search
Search in Odesi

Results Showing 1 to 10 of about 1071

Survey of Labour and Income Dynamics, 1993-1994 [Canada]: Longitudinal Person File
The Survey of Labour and Income Dynamics (SLID) is a Statistics Canada survey intended for use in research on changes over time in Canadians labour force activity status and economic well-being. Two major characteristics of the survey design ... show more

The Labour Market Activity Survey (LMAS) has been designed as a replacement for the AWPS. The LMAS questionnaires collected information on the annual labour market participation of Canadians and the characteristics of up to five jobs held in each ... show more

The demographic and labour market activity information that is in the Labour Market Activity Survey (LMAS) is now available on compact disk. The files contain all the important demographic variables such as province, age, sex, marital status, ... show more

Limit your search:

Keyword
employment 649
income 532
unemployment 608
occupations 426
labour force 406
+ More

Series
Labour Force Survey 622
Travel Survey of Residents of Canada 202
Survey of Consumer Finances 72
Census of Population 53
Survey of Labour and Income Dynamics 52
+ More
SDA (Dalhousie only) ▀

SDA allows you to download microdata from some Statistics Canada surveys (and a few extra datasets), and also to create online cross-tabs.

Access SDA:
• By going to SDA and logging in with your Dalhousie credentials (if off-campus).
• Make sure to comply with the DLI license agreement.

Learn about using SDA:
• View “Accessing SDA@CHASS" video to see how to access and download data.
• View "Using SDA@CHASS to View Data" video to see how to create online cross-tabs.
• Try one of the exercises under "SDA" in the "Restricted interface" box of this page.
FICS 2012 added to SDA
2014-04-25 17:11:46
2012 data for the Employment Insurance Coverage Survey (EICS) has been added to SDA: Employment Insurance Coverage Survey (EICS) The Employment Insurance Coverage Survey provides a meaningful picture of who does or does not have access to EI benefits among the jobless and those in a situation of underemployment. The survey also covers access to [...] [...][...]<+ more>

LFS March 2014
2014-04-04 17:14:11
LFS data for March 2014 are now available in SDA: LFS English Les données de l’EPA du mois de mars sont maintenant disponibles sur le site SDA: EPA Français Sincerely, The SDA Team[...]<+ more>

- RSS news [feed] - - Dismiss news - [x]
Data and Statistics

Data Liberation Initiative (DLI)

The Data Liberation Initiative (DLI) at Dalhousie University is a project to provide access to Statistics Canada Public Use Microdata files for researchers and faculty at participating institutions in order to conduct research. Files for use at Dalhousie are made available via CHASS.

- Browse the DLI collection.
- Click on "All products" or "Browse by year" and 2016.

Using SDA@CHASS to View Data

DALHOUSIE UNIVERSITY

Accessing SDA@CHASS and Downloading Data

August 2016
Nesstar (Dal Only)

Statistics Canada's interface to access microdata from Public Use Microdata Files (PUMFs) in the DLI's collection. Also includes metadata of some master files (available in RDCs).

Access Nesstar:

• By going to Nesstar and logging in with your Dalhousie credentials (if off-campus).
• Make sure to comply with the DLI license agreement.
Variable ALIMO: Support payments received

LITERAL QUESTION
Support payments received.

Values Categories
99999996 Valid skip

SUMMARY STATISTICS
This variable is numeric

CONCEPT
- Support payments received

UNIVERSE
Persons aged 16 and over

NOTES
Support payments received, such as alimony and child support.
Other Sources of Canadian Data

Data can be found in many different places in the open web.

Find and sometimes access data:

• By doing smart searches in Google by using the 'country' search tool or by using the site: filename: OR and () operators.

• By exploring national, provincial, or municipal open data portals: including Open Halifax or Open Nova Scotia if appropriate for your question.

• By exploring links shared on the Data and Statistics research guide.

• Sometimes, by finding a "data" or "statistics" page in the research guide for your own discipline.
You can add standard Stats Can geography to your search terms.

**Google search tips:**

- Try adding the following to your search expression: (data OR dataset OR stat OR statistic)
- Try using the "Country" filter.
- Try limiting to federal, provincial, or municipal governments with the site operator - site:.gc.ca
- Try finding spreadsheets by using the filetype operator – (filetype:csv OR filetype:xls OR filetype:xlsx)
Searching Google

- **Site:** adresse of website or domain to search in a specific web site or domain.
- **Filetype:** extension to search for specific types of files
- **-word** to search pages that don’t have a specific word in their results.
- **OR** to find synonyms.

Don’t forget to check the sources of your findings!
Open Data Repositories

Check open data repositories at the national, provincial, and even city level to see if you can find any datasets for your desired level of geography. Typically contains less detailed data but sometimes at very precise levels of geography.

For Canadian Data Repositories:

- Explore FRDR.
- Explore a list of Canadian Open Data repositories in Open Government Canada.
- Try looking at Canadian Research Repositories (see this presentation by Peter Webster and exercise).
- Learn about advanced data extraction from open repositories by trying this Peter Webster Nova Scotia Open Data exercise.
Open Government Across Canada

From coast to coast to coast Canadian provinces, territories and municipalities are joining the conversation on open government. Here you will find information about open government activities across the country, and tools to help get your jurisdiction engaged in open government.

- Open Government Programs in Canada
  - Open Provinces
  - Open Municipalities
  - Open Initiatives
Research Guides

The Data and Statistics research guide has links to more resources. Many other research guides include "data" pages or boxes.

Data and Statistics:
• [http://dal.ca.libguides.com/data/tutorials](http://dal.ca.libguides.com/data/tutorials)
  • Includes help with working with the census.
  • Includes tutorials about Excel.
• [http://dal.ca.libguides.com/data/geospatial](http://dal.ca.libguides.com/data/geospatial) (mostly public resources)
  • Portals and links to resources containing GIS, geospatial data, imagery, etc.

Other Guides:
• [http://dal.ca.libguides.com/](http://dal.ca.libguides.com/)
  • See if the research guide for your discipline has a "Data" or "Statistic" page.
Environmental Data - Science Perspective

- Open Data Portal (Canada)
  Open datasets from Canadian federal government departments and agencies, including environmental, fisheries, natural resource and national parks sources.

- NRC Gateway to Research Data
  Canadian scientific and medical data sets.

- Long Term Ecological Research (LTER) Network

- DataOne (Data Observation Network for Earth)
  Freely available data contributed by environmental researchers in the US and other countries.

- Inventory of Canadian Environmental and Occupational Health Data Sources

- FAA National Wildlife Aircraft Strike Database
  Data on reported number of wildlife (birds, bats, and other animals) strikes at airports throughout the US and Canada (1990 to the present). Records include date, airport, type of aircraft, phase of flight, etc.

- SEABED (Searchable Benthic Data)
  from MarLIN (Marine Life Information Network for Britain and Ireland)

- Best Practices for Preparing Environmental Data Sets to Share
  Prepared by the Environmental Sciences Division, Oak Ridge
  Revised June 2007.

More Data Sources

- Data for the Social Sciences (Dal Libraries subject guide)
Nova Scotia Statistics

- Child and Youth Injuries in Nova Scotia 1995-2004
  "Injury is the leading cause of death and hospitalization among children and youth in Nova Scotia. In fact, injury contributes to more death and disability for young Nova Scotians than all other causes combined. During the period of this report, Nova Scotia lost nearly one child every week as a result of an injury.”

- Nova Scotia Department of Health Annual Statistical Report 2007-08
  Includes indicators and rates on such as things as: lifestyles, surgeries, health care costs, manpower and more.

  Reports regarding Nova Scotia Perinatal Practices can be found at this site maintained by the Reproductive Care Program of Nova Scotia. Special tabulations may also be requested by researchers, educators and students.

- Nova Scotia Cancer Facts
  Includes links to Understanding Cancer in Nova Scotia 2000-2004. Special tabulations may also be requested by researchers, educators and students from Cancer Care Nova Scotia.
Introduction: Data/Statistics Sources

Click on the tabs in the box below to access listings of sources for data on Halifax/NS, Canada, other countries (World), Companies and Industries/Markets. For further research assistance, please contact Dr. Joyline Makani.

Data/Statistics Sources

- Community Profiles (Statistics Canada)

Present information on the economic and business condition for various levels of geography, including regional, provincial, and metropolitan areas.
Almost Done!

• After you find what you’re looking for:
  • Make sure you can open the file or files (if applicable).
  • Do one last search to make sure you have the most recent version.
  • Carefully read any accompanying documentation.

• Cite your Stat Can sources and/or other sources.
A Possible workflow

• Quickly check sources that are already familiar to you.
  • Become familiar with the Canadian census, and with Stat Can’s subject portal.

• Become familiar with your local open data portal and quickly check relevant links. If possible, do a variable search in your data discovery tool.

• Search for your question in Google and explore the results.
  • When searching for Canadian data, use Google results to navigate to relevant branches of government, to the relevant Departments and/or to the relevant Stat Can surveys.

• Ask your data librarian for help.
Need Help?
Finding data and statistics

- **WHO**: Ask your friendly data librarian: Julie.Marcoux@dal.ca or 902-494-3189 or room 3621 of the Killam Library.

- **WHERE**: Find a statistics LibGuide or a LibGuide in your discipline with a page about searching for statistics.

- **WHAT**: find data and transform into a useful form: CSV, Excel, GeoSuite, restricted microdata, those weird tables on that random website, etc.

- **WHAT**: Get help with geography, searching in Google, retrieving microdata, navigating Stat Can’s website, etc.

- **SPECIAL NOTE**: Your data librarian is an Excel Expert! Yay! 😊
Tabula

Tabula

Tabula is a tool for liberating data tables locked inside PDF files.

View the Project on GitHub

tabulapdf/tabula

Download for
Windows
Download for
Mac
View source on
GitHub

Current Version: 1.1.0

Other Versions: pre-releases & archives

Need help? Open an issue on Github.

Donate: Help support this project by backing us on OpenCollective.

We'd love to hear from you! Say hi on Twitter at @TabulaPDF

Latest Version: Tabula 1.1.0

We're proud to announce the first official release of Tabula 1.1!

Tabula 1.1 contains a rewrite of our processing backend which should provide a significant performance increase -- up to 7x faster detection and extraction! The backend rewrite also improves support for RTL languages and fixes many other bugs. (You can read about all the changes in the release notes.)

Download Tabula 1.1 below, or on the release notes page.

Special thanks to our OpenCollective backers for supporting our work on Tabula; if you find Tabula useful in your work, please consider a one-time or monthly donation.

How Can Tabula Help Me?

If you've ever tried to do anything with data provided to you in PDFs, you know how painful it is -- there's no easy way to copy-and-paste rows of data out of PDF files. Tabula allows you to extract that data into a CSV or Microsoft Excel spreadsheet using a simple, easy-to-use interface. Tabula works on Mac, Windows and Linux.

Who Uses Tabula?

Tabula is used to power investigative reporting at news organizations of all sizes, including ProPublica, The Times of London, Foreign Policy, La Nación (Argentina), The New York Times and the St. Paul (MN) Pioneer Press.
Data Librarian Services

- One-on-one consultations or workshops.
- Group consultations or workshops.
- Class presentations or workshops.
- Visit me in my office.
- Invite me somewhere else on campus.
- Remote help (call me and I will share my screen, with or without an appointment)
- Learn new skills.
- Discuss a specific project.
- Get help retrieving a dataset or finding data or statistics.
WHO: Contact your friendly GIS Centre: GIS@dal.ca or 5th floor of the Killam Library.

WHERE: GISciences Centre website.

WHAT: Help with ArcGIS, help with extracting and analyzing a variety of data sources, help producing customized maps, help with GIS software.

WHAT: One-on-one, group or class training.